

## REMARKS

Applicant addresses the examiner's remarks in the order presented in the Advisory Action (dated October 23, 2007). All claim amendments are made without prejudice and do not represent acquiescence in any ground of rejection.

### STATUS OF THE CLAIMS

Claims 1-19 were pending in this application. Claims 1, 2, 9, 10, and 17 have been amended for clarity and consistency of claim language. Support for the claim amendments can be found throughout the specification and claims as filed. Specifically, support for amended claim 1 can be found, *e.g.*, at least in paragraphs [0044], [0045], and [0049] of the specification as filed. Support for amended claim 2 can be found, *e.g.*, at least in paragraph [0045] of the specification as filed. Support for amended claims 9, 10, and 17 can be found, *e.g.*, at least in paragraph [0049] of the specification as filed. Following entry of the amendments, claims 1-19 will be pending and at issue. No new matter is added.

### REJECTIONS UNDER 35 U.S.C. § 103(a)

#### Claims 1, 3-15, and 17-19

Claims 1, 3-15, and 17-19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,232,706 to Dai *et al.* (Dai) in view of U.S. Patent Application Publication 2002/0036452 to Muroyama *et al.* (Muroyama). Applicant traverses this ground of rejection by amendment and argument.

Three requirements must be met for a *prima facie* case of obviousness. First, the prior art references must teach all the limitations of the claims. Second, there must be a motivation to modify the reference or combine the teachings to produce the claimed invention. Third, a reasonable expectation of success is required. Here, the cited prior art references do not teach all of the elements of applicant's claims. Therefore, a *prima facie* case of obviousness has not been made.

Dai discloses a method of making carbon nanotube bundles using an iron oxide catalyst disposed on a substrate, wherein the iron oxide catalyst is oxidized after deposition. Dai does not disclose a method for synthesizing carbon nanostructures comprising providing a bimetallic or trimetallic metalorganic layer on a substrate and volatilizing the organic portion of the metalorganic layer. Applicant has amended independent claim 1 to recite a method for synthesizing carbon nanostructures comprising providing a bimetallic or trimetallic metalorganic layer on a substrate and volatilizing the organic portion of the metalorganic layer. Therefore, Dai does not teach all of the elements of the claimed methods and does not itself render the claims obvious.

Muroyama does not overcome the deficiencies of Dai. Muroyama discloses a method of growing a carbon film using a thin layer of an organometallic catalyst. However, at no point does Muroyama disclose a method for synthesizing carbon nanostructures comprising providing a bimetallic or trimetallic metalorganic layer on a substrate and volatilizing the organic portion of the metalorganic layer. Applicant has amended independent claim 1 to recite a method for synthesizing carbon nanostructures comprising providing a bimetallic or trimetallic metalorganic layer on a substrate and volatilizing the organic portion of the metalorganic layer. Because the combination of Dai and Muroyama does not teach all of the claim elements, the combination cannot render the claims obvious. Therefore, the examiner is respectfully requested to withdraw the rejection of claims 1, 3-15, or 17-19 under 35 U.S.C. § 103(a).

#### Claim 2

Claim 2 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dai in view of Muroyama and U.S. Patent No. 5,863,601 to Kikuchi *et al.* (Kikuchi). Applicant traverses this ground of rejection by amendment and argument.

Because claim 2 depends from claim 1, it contains all the elements of claim 1. As discussed above, the combination of Dai and Muroyama does not teach all of the elements of claim 1. Accordingly, the combination of Dai, Muroyama, and Kikuchi fails to teach all of the elements of claim 2 and cannot render it obvious. Therefore, the examiner is respectfully requested to withdraw the rejection of claim 2 under 35 U.S.C. § 103(a).

#### Claim 16

Claim 16 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dai in view of Muroyama and U.S. Patent No. 4,650,895 to Kadokura *et al.* (Kadokura). Applicant traverses this ground of rejection by amendment and argument.

Because claim 16 depends from claim 1, it contains all the elements of claim 1. As discussed above, the combination of Dai and Muroyama does not teach all of the elements of claim 1. Accordingly, the combination of Dai, Muroyama, and Kadokura fails to teach all of the elements of claim 16 and cannot render it obvious. Therefore, the examiner is respectfully requested to withdraw the rejection of claim 16 under 35 U.S.C. § 103(a).

In conclusion, the cited references do not disclose all the limitations of the claims. Accordingly, a *prima facie* case of obviousness has not been presented by the Office. Therefore, the examiner is respectfully requested to withdraw the rejection of claims 1-19 under 35 U.S.C. § 103(a).

## CONCLUSION

If the examiner has any questions concerning this Response, the examiner is invited to telephone applicant's representative at (206) 389-4550.

The Commissioner is hereby authorized to charge Deposit Account 19-2555 for the Request for Continued Examination fee in the amount of \$810 as well as any additional fees that may be required to render the present submission timely.

Respectfully submitted,

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